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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/764,924	01/26/2004	Brenda Margerat Gadd	03485- P0010A	9636

24126 7590 03/08/2006

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EXAMINER

GRAYSAY, TAMARA L

ART UNIT PAPER NUMBER

3636

DATE MAILED: 03/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/764,924	Applicant(s) GADD ET AL.	
	Examiner Tamara L. Graysay	Art Unit 3636	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 January 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>(2 pages)</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statement filed 24 May 2004 fails to comply with 37 CFR 1.98(a)(2), which requires a legible copy of each cited foreign patent document; each non-patent literature publication or that portion which caused it to be listed; and all other information or that portion which caused it to be listed. It has been placed in the application file, but the information referred to therein has not been considered.

Drawings

2. The drawings are objected to because of the following:
 - a. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the embodiment wherein the coil is a tension spring, as recited in claim 8, must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.
 - b. They fail to comply with 37 CFR 1.84(l) because every line (FIGS. 1-5) is not sufficiently dense and dark, and uniformly thick and well-defined.
 - c. They fail to comply with 37 CFR 1.84(p)(5) because they do not include the following reference character(s) mentioned in the description: "21" (e.g., P.6, L.19).
 - d. They fail to comply with 37 CFR 1.84(u)(2) because the view numbers are not larger than the numbers used for reference characters.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should

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include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

3. The disclosure is objected to because of the following informalities:

- a. Page 6, line 14: [hoops 13] should be hoops 11.

Appropriate correction is required.

Claim Objections

4. Claims 2, 7, 10 are objected to because of the following informalities:

- a. Claims 2 and 10: “tube walls” should be related to the flexible tubular sheet or the bore of the tube recited in antecedent.
- b. Claim 7: “the restrictor” lacks antecedent basis; however, the term is provided for in claim 6. Therefore, the claim has been treated as dependent upon claim 6, not claim 4.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claim 8 is rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential elements, such omission amounting to a gap between the elements. See MPEP § 2172.01. The omitted elements are: the support member to support the tube in the deployed state, as mentioned at page 3, lines 5-6.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1, 2, 3, 4, 6, 7, 10, 12, 15, 16, 17, 18, 21, 22 are rejected under 35 U.S.C. 102(b) as being anticipated by Zheng (US-5618246).

a. Claim 1: Zheng discloses a flexible tubular sheet having walls (FIG. 12). The tube is self-supporting when deployed (FIG. 12) and collapsible to a stored state (e.g., 5:54-61).

b. Claims 2, 3: Zheng comprises a compression spring coil (helical coil line depicted in FIGS. 2, 12).

- c. Claim 4: Zheng provides restriction means (e.g., ties 166 in FIG. 12 and 5:54-61).
- d. Claims 6 and 7: Zheng, as depicted in FIG. 12 comprises a restrictor (ties 166) that allow height (axial length) adjustment of the two-part tube embodiment. For example, one part (162) of the tube is compressed using ties 166 while the other part (164) of the tube is deployed, thus a deployed height adjustment is accomplished using the ties of the two-part tube.
- e. Claim 10: The Zheng coil is a compressible support member in a portion of a wall of the tube, as depicted in FIGS. 2, 12.
- f. Claim 12: Zheng depicts both ends of the tube open (FIG. 12).
- g. Claims 15-17: Zheng discloses circular, square, and polygon shaped tubes (6:54-57).
- h. Claim 18: Zheng discloses a triangular tube, i.e., regular polygon shape (6:54-57).
- i. Claim 21: Zheng discloses a tube comprising a flexible tubular sheet that defines a space within the bore of the tube (FIG. 12) and a coil (the helical line in FIGS. 2, 12) to support the walls of the tube.

j. Claim 22: Zheng discloses a tube comprising support means (helical coil in FIGS. 2, 12) and a flexible tubular sheet defining a space within the bore of the tube (FIG. 12).

7. Claims 13, 14 are rejected under 35 U.S.C. 102(b) as being anticipated by Plinta (US-5528849).

Claims 13 and 14: Plinta discloses a flexible tubular sheet (24) having walls (FIG. 5).

The tube is self-supporting when deployed (FIG. 5) and collapsible to a stored state (e.g., FIG. 6). The tube comprises means for securing the tube to the ground (guy lines and stakes depicted in FIG. 5).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 5, 8, 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zheng (US-5618246).

a. Claim 5: The restriction means (ties 166) in the embodiment depicted in FIG. 12 are adjustable insofar as tying the left and right end ties of tube 162 to the left end ties 166 of tube 164 allows adjustment of the height (axial length) of the two-part tube embodiment. For example, one part (162) of the tube is compressed using ties 166 while the other part (164) of the tube is deployed, thus a deployed height adjustment is accomplished using the ties of the two-part tube.

b. Claim 8: Zheng uses a compression spring that biases the tube to the deployed state, rather than a tension spring (and support member) that biases the tube to the stowed state. The examiner takes Official notice that tension springs that bias coil springs to a compact state together with a support member to maintain a tension coil spring in a deployed state were known expedients at the time the invention was made.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the support member in Zheng to include a tension spring and support member in lieu of the compression spring, in order to bias the tube to

the stowed state. Such an arrangement presents no novel or unexpected result over the compression coil spring used in the Zheng reference. Use of such a support means in lieu of those used in the Zheng references solves no stated problem and would have been an obvious matter of design choice within the skill of the art. In re Launder, 42 CCPA 886, 222 F.2d 371, 105 USPQ 446 (1955); Flour City Architectural Metals v. Alpana Aluminum Products, Inc., 454 F. 2d 98, 172 USPQ 341 (8th Cir. 1972); National Connector Corp. v. Malco Manufacturing Co., 392 F.2d 766. 157 USPQ 401 (8th Cir.) cert. denied, 393 U.S. 923, 159 USPQ 799 (1968).

c. Claim 19: Zheng discloses various shapes for the tube (e.g., 6:54-57) including polygonal and “other shape.” An irregular polygon was a known shape at the time the invention was made. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the circular, triangular, rectangular, polygonal, or other shape to be an irregular polygon as a matter of design choice. Such a change in shape is generally recognized as being within the level of ordinary skill in the art because applicant presents no novel or unexpected result over the shapes particularly mentioned in the reference. Use of such a shape would have been an obvious matter of design choice within the skill of the art. In re Launder, 42 CCPA 886, 222 F.2d 371, 105 USPQ 446 (1955); Flour City Architectural Metals v. Alpana Aluminum Products, Inc., 454 F. 2d 98, 172 USPQ 341 (8th Cir. 1972); National Connector Corp. v. Malco Manufacturing Co., 392 F.2d 766. 157 USPQ 401 (8th Cir.) cert. denied, 393 U.S. 923, 159 USPQ 799 (1968).

9. Claims 9, 11, 20, 23, 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zheng (US-5618246) in view of Riesen (CH-623469).

a. Claims 9 and 23: Zheng mentions that the coil can be hollow plastic, but stops short in indicating that the coil is inflatable.

Riesen teaches a tube having inflatable support means. The inflatable tube can be stored flat.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the coil of Zheng to be inflatable, such as suggested by the inflatable support of Riesen, in order to allow the device to be stowed flat.

b. Claim 11: Zheng discloses a self-supporting tube (e.g., 112, 114, 116, 118, 120, 122 in FIG. 8). Zheng lacks a removable base portion.

Riesen suggests using a removable base portion (13 depicted in FIG. 2) to close an end of the tube.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the tube of Zheng to include a removable base portion, such as suggested by the removable base portions of Riesen, in order to close an end of the tube. Such an arrangement would provide a challenge to the user of the device insofar as one or more of the tubes may have removable base portions that would prevent a user from exiting at every tube distal end location.

c. Claims 20 and 24: The inflatable tube of the Zheng and Riesen combination is capable of use as a buoyancy aid insofar as the stowed state is any desired amount of deflation between fully deployed and fully deflated. For example, if stowing in a watercraft or the back of a car the deflation or stowed state need not be fully deflated but only sufficiently deflated to fit into the stow compartment or area. As such, the tube is capable of use as a buoyancy aid when in a stowed state, as broadly recited.

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Conclusion


10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Curley (US-5564454) teaches a coil support for a tube.
- Stockman (US-2828755) teaches a tent biased to the deployed state (FIG. 1, 2) and restrained in the stowed state by a restraint (FIG. 5).
- Krieger (US-2781766) teaches a portable square tube stowed via gravity and deployed by the physical force of a user.
- Wilson (US-2188213) teaches a portable tube deployable to different axial lengths.
- Derryberry (US-4224754) teaches a portable tube biased to the deployed position.
- Burtoft (US-3224150) teaches a portable tube that has stakes (feet 13; FIG. 1; 2:37-50) at the bottom.
- Wright (US-3720556) teaches a helical coil supporting structure for a dome.
- Wilbourn (US-5226261) teaches a portable shelter having inflatable support members.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tamara L. Graysay whose telephone number is 571-272-6728. The examiner can normally be reached on Mon - Fri from 8:30am to 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter M. Cuomo, can be reached on 571-272-6856. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Tamara L. Graysay 3/5/06
Examiner
Art Unit 3636

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